

-- ABSTRACT

In a dielectrophoretic cell having an array of electrodes and means to apply electrical signals to the electrodes. The electrodes include a planar array of serpentine or zig-zag electrodes with their curvatures in register. The serpentine electrodes may be sinusoidal, half sinusoidal, or elongated "C" in shape. The positions of maximum curvature of each serpentine or zig-zag electrode may be arranged in linear alignment, or along a curve. The cell may be used for stationary or traveling wave dielectrophoresis. Particles traveling in opposite directions in traveling wave dielectrophoresis can do so without interference, allowing "traffic control". Particles can be characterized and separated, and particles at high concentrations, or particles of different types, can be handled. --